Docket No.: IRD-0004
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Hiroshi Morikawa

Application No.: 10/521,166	Confirmation No.: 5678
Filed: January 14, 2005	Art Unit: 2625
For: OUTPUT APPARATUS AND PROGRAM THEREOF	Examiner: B. D. REINIER

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

This is an Appeal Brief under 37 C.F.R. §41.37 appealing the final decision of the Examiner dated October 1, 2008. Each of the topics required by 37 C.F.R. §41.37 is presented herewith and is labeled appropriately. This brief is in furtherance of the Final Office Action of October 1, 2008.

A Notice of Appeal was filed in this case on February 6, 2009, along with a Request for Panel Review. The Notice of Panel Decision from Pre-Appeal Brief Review mailed on March 13, 2009 ("the Decision) indicates that claims 3, 7-9, 17, 18, 22, 23 and 25-29 remain rejected.

The Decision further indicates that the extendable time period for the filing of the Appellant's Brief will be reset to be one month from the mailing of the Decision. Accordingly, the filing of this Appellant's Brief is timely. 37 C.F.R. §1.136.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

I.	Real Party In Interest
II	Related Appeals and Interferences
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I. REAL PARTY IN INTEREST

Software Cradle CO. LTD., of Osaka, Japan is the real party in interest of the present application. An assignment of all rights in the present application to Software Cradle CO. LTD was executed by the inventor and recorded by the U.S. Patent and Trademark Office at **reel 016801, frame 0013**.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 15 claims pending in application.

B. Current Status of Claims

1. Claims canceled: 1-2, 6, 10-16, 19-21 and 24

2. Claims withdrawn from consideration but not canceled: none

3. Claims pending: 3-5, 7-9, 17-18, 22-23, and 25-29

4. Claims objected to: 4 and 5

5. Claims allowed: none

6. Claims rejected: 3-5, 7-9, 17-18, 22-23, and 25-29

C. Claims On Appeal

Appellant hereby appeals the final rejection of claims 3-5, 7-9, 17-18, 22-23, and 25-29.

IV. STATUS OF AMENDMENTS

Provided is a statement of the status of any amendment filed subsequent to final rejection.

Applicant filed an Amendment After-Final Rejection on November 17, 2008.

Rejected claims 3-5, 7-9, 17-18, 22-23, and 25-29 are presented in the Claims Appendix.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following description is provided for illustrative purposes and is not intended to limit the scope of the invention.

Claim 3. An output apparatus for transforming and outputting bitmap data comprising:	Fig. 26; page 22, line 20
a bitmap data storage unit for storing bitmap data before transformation;	Fig. 26, element 102; page 22, line 21

a vectorization unit for producing first vector data by vectorizing at least one part of said bitmap data;	Fig. 26, element 262; page 22, line 23
a data production unit for producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and	Fig. 26, element 263; page 22, line 21
an output unit for outputting said bitmap data after transformation produced by said data production unit, said data production unit comprising:	Fig. 26, element 264; page 22, line 23
an inverse transformation unit for producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;	Fig. 26, element 2631; page 24, line 4
a color determination unit for determining a color of a position, if the first vector data is in a passing relationship with a dot represented by the second coordinate information, the color of the position specified by the second coordinate information being determined based on the position specified by said second coordinate information, said first vector data produced by said vectorization unit and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information; and	Fig. 26, element 2632; page 24, line 21
a control unit for controlling so that said second coordinate information production by said inverse transformation unit and said dot color determination by said color determination unit can be performed on all dots on bitmap data to be outputted.	Fig. 26, element 2633; page 26, line 21

Claim 4. The output apparatus according to claim 3, wherein:	Fig. 26; page 22, line 20
in a case where a line represented by said first vector data that was produced by said vectorization unit passes through a dot including a position specified by said second coordinate information,	page 22, line 20
said color determination unit determines in such a manner that if said position is placed above said line,	page 24, line 12
a color of a dot immediately above said dot including said position is determined as a color of said position, or if placed below said line,	page 24, line 12
a color of a dot immediately below said dot including said position is determined as a color of said position, and then sets up said color determined thereby for said target dot specified by said first coordinate information.	page 24, line 12

Claim 5. The output apparatus according to claim 3, wherein:	Fig. 26; page 22, line 20
in a case where a line represented by said first vector data that was produced by said vectorization part passes through a dot including a position specified by said second coordinate information,	page 22, line 20
said color determination unit determines in such a manner that if said position is placed on a left hand with respect to said line, a color of a dot immediately on a left, adjacent to said dot including said position is determined as a color of said position, or if placed on a right hand, a color	page 25, line 24

of a dot immediately on a right, adjacent to said dot including said position is determined as a color of said position, and then sets up said color determined thereby for said dot specified by said first coordinate information.	

<u>Claim 7</u>. An output apparatus comprising:	Fig. 10; page 16, line 2
a bitmap data storage for storing bitmap data before transformation;	Fig. 10, element 102; page 16, line 4
a bitmap data acquisition for acquiring bitmap data from said bitmap data storage unit;	Fig. 10, element 103; page 16, line 4
a transformation rule retention unit for retaining at least one bitmap data transformation rule that is composed of a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part;	Fig. 10, element 1001; page 16, line 5
a data transformation for transforming part of said bitmap data according to said rule, checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched	Fig. 10, element 1002; page 16, line 5
replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and	Fig. 10; page 16, line 5

an output unit for outputting data that is produced based on transformation results from said data transformation unit and processing results from said jaggy elimination processing unit.	Fig. 10, element 105; page 16, line 6

<u>Claim 8</u>. The output apparatus according to claim 7, wherein:	Fig. 10; page 16, line 2
said certain part is in a rectangular shape having a size of n x m, where n and m represent a positive integer.	Fig. 10; page 17, line 20

<u>Claim 9</u>. The output apparatus according to claim 8, wherein:	Fig. 10; page 16, line 2
said size is 3 x 3.	Fig. 10; page 17, line 20

<u>Claim 17</u>. A method for transforming and outputting bitmap data comprising the steps of:	Page 22, line 29
producing first vector data by vectorizing at least one part of bitmap data before transformation that is stored;	Page 23, line 4
producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and	Page 23, line 13
outputting said bitmap data after transformation, said step of producing	Page 24, line 13

bitmap data after transformation comprising:	
producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed,	Page 24, line 4
using said inverse function of said predetermined calculation; if the first vector data is in a passing relationship with a dot represented by the second coordinate information,	Page 24, line 4
determining a color of a position specified by said second coordinate information based on the position specified by said second coordinate information, said first vector data and a color of a dot on said bitmap data and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information;	Page 24, line 21
controlling so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot specified by said first coordinate information can be performed on all dots on bitmap data to be outputted.	Page 25, line 5

Claim 18 A method for outputting comprising the steps of: acquiring bitmap data stored;	Page 16, line 2
transforming part of said bitmap data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part, said transforming comprising checking	Page 16, line 9

whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and	
outputting data that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step.	Page 18, line 29

Claim 22. A computer program stored in a computer readable medium for executing processing of transforming and outputting bitmap data, comprising the steps of;	Page 23, line 4
producing first vector data by vectorizing at least one part of bitmap data stored thereon;	Page 23, line 4
producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data, and said first vector data; and	Page 23, line 13
outputting said bitmap data after transformation, said step of producing bitmap data after transformation, comprising the steps of:	Page 23, line 13
producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed,	Page 24, line 4

using said inverse function of said predetermined calculation;	Page 24, line 4
determining a color of a position specified by said second coordinate information based on said first vector data and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information; and	Page 24, line 21
controlling so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot can be performed on all dots on bitmap data to be outputted.	Page 25, line 5

<u>Claim 23</u>. A computer program stored in a computer readable medium for executing the steps of: acquiring bitmap data stored thereon;	Page 16, line 2
transforming part of said bitmap data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part, said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and	Page 16, line 9
outputting data that is produced based on transformation results obtained in said data transformation step and processing results obtained in said	Page 18, line 29

jaggy elimination step.	

Claim 25. An output apparatus for transforming and outputting bitmap data according to claim 3,	Fig. 26; page 22, line 20
wherein bitmap data after transformation is directly based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data.	Fig. 26; page 22, line 13

Claim 26. An output apparatus for transforming and outputting bitmap data according to any one of claims 3, 17, and 22,	Fig. 26; page 22, line 20
wherein a predetermined calculation is a calculation for executing a predetermined transformation on the bitmap data acquired by the bitmap data acquisition unit.	Fig. 26; page 22, line 15

Claim 27. An output apparatus for transforming and outputting bitmap data according to claim 7, further comprising:	Fig. 10; page 16, line 2
a jaggy elimination processing unit for executing processing of eliminating jaggies appearing on said bitmap data.	Fig. 10; page 16, line 21

Claim 28. A method for outputting according to claim 18, further	Page 16, line 2

comprising the step of	
eliminating jaggies appearing on said bitmap data.	Page 16, line 21

Claim 29. A computer program stored in a computer readable medium according to claim 23, further comprising the step of:	Page 17, line 5
eliminating jaggies appearing on said bitmap data.	Page 17, line 10

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether the Examiner erred in rejecting claims 3, 17, 22, 25, and 26 that have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al (US 6,232,978, hereinafter referred to as "Ishida '978") in view of Okazaki et al (US 4,736,399, hereinafter referred to as "Okazaki '399").

B. Whether the Examiner erred in rejecting claims 7-9, 18, 23, and 27-29 that have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Karidi et al (US 2003/0123094, hereinafter referred to as "Karidi '094").

VII. ARGUMENT

In the Final Office Action of October 1, 2008:

The Examiner erred in rejecting claims 3, 17, 22, 25, and 26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Okazaki '399.

The Examiner erred in rejecting claims 7-9, 18, 23, and 27-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Karidi '094.

For at least the following reasons, Appellant submits that this rejection is both technically and legally unsound and should therefore be reversed.

For purposes of this appeal brief only, and without conceding the teachings of any prior art reference, the claims have been grouped as indicated below.

A. The Examiner erred in rejecting claims 3, 17, 22, 25, and 26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Okazaki '399.

The Office action has not established *prima facie* case under 35 U.S.C. § 103. Specifically, "to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. and Inter. 1985).

Moreover, in *KSR International v. Teleflex Inc.,* the Supreme Court expounded on the meaning of obviousness in applying prior art. MPEP states twice at §§2141 III and 2142 as follows:

> The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) noted that **the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit**. The Federal Circuit has stated that "**rejections on obviousness cannot be sustained with mere conclusory statements**; instead, there **must** be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR,* 550 U.S. at ___ , 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). (Emphasis added.)

As such, this rejection of claims 3 , 17, 22, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Okazaki '399 is traversed at least for the following reasons.

<u>Claims *3, 25 and 26*</u>

Claims 25 and 26 are dependent upon claim 3.

Claim 3 recites*:*
An output apparatus for transforming and outputting bitmap data comprising:

a bitmap data storage unit for storing bitmap data before transformation;

a vectorization unit for producing first vector data by vectorizing at least one part of said bitmap data;

***a data production unit** for producing bitmap data after transformation based on*

an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and

***an output unit** for outputting said bitmap data after transformation produced by said data production unit,*

said data production unit comprising:

***an inverse transformation unit** for producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*

a color determination unit *for determining a color of a position, if the first vector data is in a passing relationship with a dot represented by the second coordinate information,*

the color of the position specified by the second coordinate information being determined based on the position specified by said second coordinate information,

said first vector data produced by said vectorization unit and a color of a dot on said bitmap data,

and then setting up said color determined thereby for said target dot specified by said first coordinate information; and

a control unit *for controlling so that said second coordinate information production by said inverse transformation unit and*

said dot color determination by said color determination unit can be performed on all dots on bitmap data to be outputted.

U.S. Patent Application Publication No. 2006-0119897, the publication document for the present application, provides in paragraph [0167].

[0167] The data production unit 263 produces bitmap data after transformation based on the inverse function of a certain calculation, the bitmap data acquired by the bitmap data acquisition unit 103, and the first vector data described above. The term "certain calculation" would mean a calculation for executing a certain transformation on the bitmap data acquired by the bitmap data acquisition unit 103. By performing a certain calculation on "bitmap data before transformation," i.e., bitmap data that has not undergone a certain transformation, "bitmap data after transformation," i.e., bitmap data

that has undergone the certain transformation is created. When coordinate information of the bitmap data before transformation is handed over to the function of this certain calculation, coordinate information of the bitmap data after transformation is obtained. Using this function, the way in which bitmap data is transformed can be altered. Assuming that with the help of the function (f) coordinate information (x, y) of the bitmap data before transformation is altered to coordinate information (X, Y) of the bitmap data after transformation, the function (f) is described as (X, Y)=f(x, y). The coordinate information is provided for specifying a position on bitmap data, and can be composed of coordinate values of two dimensions, for example. Data configuration of the coordinate information is irrelevant. In this manner, using the function of a certain calculation as described above enables coordinate information within bitmap data before transformation to change into coordinate information after transformation, and thereby, bitmap data after transformation is produced. It should, however, be noted that in the fourth embodiment, the inverse function of a certain calculation is employed for producing bitmap data after transformation. Typically, the data production unit 263 can be formed by using an MPU, a memory, and the like, and all processes assigned thereto are realized by software that is stored in a recording medium such as a ROM. However, hardware implementation (using a dedicated circuit) is also feasible.

Page 6 of the Office Action alleges these features can be found col. 1 lines 9-13.

Col. 1 lines 9-13 of Ishida '978 discloses an invention that relates to magnification or "zoom" processing, particularly reduction processing, of a digital binary image, and to an image processing apparatus and method for obtaining a high-quality zoomed image using contour information.

Ishida '978 arguably discloses a *bitmap data storage unit for storing bitmap data* (col. 43, hard disk) but nevertheless ***fails*** to disclose, teach or suggest *storing bitmap data before transformation.*

Ishida '978 arguably discloses production of a first vector (col. 14, lines 41-43) but nevertheless ***fails*** to disclose, teach or suggest a vectorization unit for producing first vector data *by vectorizing at least one part of said bitmap data.*

Page 6 of the Office Action alleges these features can be found Col. 14, lines 44-45.

Col. 14, lines 44-45 of Ishida '978 disclose how the outline vector data of the entered binary image is extracted. The zoom ratio controller subjects the extracted outline vectors to smoothing/zooming processing at a magnification set by the procedure.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner' The Examiner's rejection on obviousness is mere conclusory statements without the explicit analysis supporting the rejection, and without articulated reasoning with rational underpinning to support the legal conclusion of obviousness, as required under KSR, *Id.*

- **Thus Ishida '978 fails, to disclose, teach, or suggest a bitmap data storage unit for storing bitmap data before transformation; a vectorization unit for producing first vector data by vectorizing at least one part of said bitmap data.**

Moreover, Ishida '978 ***fails*** to disclose, teach or suggest:

> ***a data production unit*** *for producing bitmap data after transformation based on*
>
> *an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and*
>
> ***an output unit*** *for outputting said bitmap data after transformation produced by said data production unit.*

Paragraph 6 of the Office Action alleges that a data production unit for producing bitmap data after transformation is based on a predetermined calculation, said bitmap data before transformation, and said first vector data.

The Office Action ***does not*** mention producing bitmap data after transformation is based on *an inverse function of a predetermined calculation.*

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Ishida' 978 fails, to disclose, teach, or suggest a data production unit for producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and an output unit for outputting said bitn1ap data after transformation produced by said data production unit.**

On page 7 of the final Office Action dated October, 1, 2008; the examiner readily ***admits*** Ishida '978 does not disclose:

> ***an inverse transformation unit*** *for producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*
>
> ***a color determination unit*** *for determining a color of a position, if the first vector data is in a passing relationship with a dot represented by the second coordinate information,*

the color of the position specified by the second coordinate information being determined based on the position specified by said second coordinate information,

said first vector data produced by said vectorization unit and a color of a dot on said bitmap data,

and then setting up said color determined thereby for said target dot specified by said first coordinate information; and

***a control unit** for controlling so that said second coordinate information production by said inverse transformation unit and*

said dot color determination by said color determination unit can be performed on all dots on bitmap data to be outputted.

The Office Action alleges, however, these claimed features are disclosed in Okazaki '399. This is inaccurate.

Okazaki '399 arguably discloses *a first coordinate system but fails to disclose, teach or suggest an inverse transformation unit for producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation.*

Page 7 of the Office Action alleges these features can be found in Col. 3, lines 21-24, Col. 3, lines 32-33, and Col. 3, lines 50-54.

Col. 3, lines 21-24 of Okazaki '399 discloses that vector X=(x, y) indicates a picture element (pixel) address of the corrected image, and vector X'=(x', y') indicates a pixel position of the distorted image.

Col. 3, lines 32-39 of Okazaki '399 discloses a correction of the distorted image is made based on this distorted image. For image correction, a table, for indicating whether or not lattice points exist in the distorted image is prepared (FIG. 4). This table will be referred to as an existing lattice point table. In FIG. 4, a hatched portion indicates an area in which lattice points exist, denotations m and n indicating the coordinates of lattice points.

Col. 3, lines 50-54 of Okazaki '399 discloses a conversion from the image of FIG. 5A to that of FIG. 5B indicates that the image is distorted. The reverse conversion f-l from the image of FIG. 5B to that of FIG. 6A indicates that the distorted image is corrected.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner' The Examiner's rejection on obviousness is mere conclusory statements without the explicit analysis supporting the rejection, and without articulated reasoning with rational underpinning to support the legal conclusion of obviousness, as required under KSR, *Id.*

- **Thus Okazaki '399 fails, to disclose, teach, or suggest an inverse transformation unit for producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation.**

Okazaki '399 ***fails*** to disclose, teach or suggest:

a color determination unit *for determining a color of a position, if the first vector data is in a passing relationship with a dot represented by the second coordinate information,*

the color of the position specified by the second coordinate information being determined based on the position specified by said second coordinate information,

said first vector data produced by said vectorization unit and a color of a dot on said bitmap data,

and then setting up said color determined thereby for said target dot specified by said first coordinate information.

Page 8 of the Office Action alleges these features can be found in col. 1, lines 14-16 & grey level, col. 7 line 34, col. 2 lines 5-13, col. 3, lines 21-24, col. 4 line 10-11, and col. 4, line 8.

Col. 1, lines 14-16 of Okazaki '399 discloses a detecting system that contains an image intensifier (1.1.) for converting a detected X-ray in1age into an optical image, and a television camera for converting the optical in1age into corresponding electrical signals.

Col. 2 lines 5-13 of Okazaki '399 discloses a first operating means for obtaining the address of each pixel in the first image data corresponding to each pixel in the first image data corresponding to each pixel address in the second image data, and second operating means for both obtaining, by an interpolating method and from the pixel intensity, the intensity of a pixel at a pixel address in the first image data, and Writing the obtained pixel intensity into a memory location at a predetern1ined pixel address in the second memory means.

Col. 3, lines 21-24 of Okazaki '399 discloses that vector X=(x, y) indicates a picture element (pixel) address of the corrected image, and vector X'=(x', y') indicates a pixel position of the distorted image.

Col. 4 lines 6-15 of Okazaki '399 discloses how it is, therefore, necessary to find a pixel position vector before correction, the gradation, e.g., the intensity of the pixel, being given to a pixel address vector after correction. To this end, by using the lattice point existing table and the lattice distortion vector table, pixel position vector XI before the correction which corresponds to a pixel address vector X after the correction, is obtained, the intensity of the pixel of this pixel position vector X' would be calculated from the distorted image.

Col. 4 lines 17-28 of Okazaki '399 discloses that it is assumed here that the pixel address vector X in the corrected image (for example, an address within an area defined by four lattice points shown in FIG. SA) exists with certainty within an area defined by four lattice points of the distorted image. With this assumption, it, is decided whether or not the coordinate vectors SCm, n), S(m+l, n), (m, rt+1) and S(m+1, n+1) of the four lattice points in the distorted image which correspond to the coordinate vectors V(m, n), V(m+l, n), V(m, n+1) and V (m+1, n+1) of four lattice points containing the pixel address vector X, are within the hatched portion in the existing lattice point table shown in FIG. 4.

Col. 5, lines 26-53 explains how the pixel intensity C(x', y') of the pixel position vector X' and the pixel intensity C(x, y) of the pixel intensity C(x, y) can be obtained.

Col. 5, lines 26-53 explains how the pixel intensity C(x', y') of the pixel position vector X' and the pixel intensity C(x, y) of the pixel intensity C(x, y) can be obtained.

The Office Action fails to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Okazaki '399 fails, to disclose, teach, or suggest a color determination unit for determining a color of a position, if the first vector data is in a passing relationship with a dot represented by the second coordinate information, the color of the position specified by said second coordinate information, said first vector data produced by said vectorization unit and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information.**

Okazaki '399 ***fails*** to disclose, teach or suggest:

> ***a control unit*** *for controlling so that said second coordinate information production by said inverse transformation unit and*
>
> *said dot color determination by said color determination unit can be performed on all dots on bitmap data to be outputted.*

Page 8 of the Office Action alleges these features can be found in col. 3 lines 20-23 and col. 3, lines 50-54.

Col. 3 lines 17-23 of Okazaki '399 discloses a distorted image oftest chart lattice points, an image of a lattice of the test chart before it is passed through the detecting system, and an image obtained when the distorted image is corrected. In the figures, vector X=(x, y) indicates a picture element (pixel) address of the corrected image~ and vector X'=(x', y') indicates a pixel position of the distorted image.

Col. 3, lines 50-54 of Okazaki '399 discloses a conversion from the image of FIG. 5A to that of FIG. 5B indicates that the image is distorted. The reverse conversion f-l from the image of FIG. 5B to that of FIG. 6A indicates that the distorted image is corrected.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Okazaki '399 fails, to disclose, teach, or suggest a control unit for controlling so that said second coordinate information production by said inverse transformation unit and said dot color determination by said color determination unit can be performed on all dots.on bitmap data to be outputted.**

Accordingly, Applicant respectfully requests that the rejection of claims 3, 25 and 26 under 35 U.S.C. § 103(a) be withdrawn.

Claims *17 and 26*

Claim 26 is dependent upon claim 17.

Claim 17 recites:

A method for transforming and outputting bitmap data comprising the steps of:

> ***producing first vector data*** *by vectorizing at least one part of bitmap data before transformation that is stored;*
>
> ***producing bitmap data*** *after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and*
>
> *outputting said bitmap data after transformation,*
>
> *said step of producing bitmap data after transformation comprising:*

> ***producing second coordinate information*** *by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*
>
> *if the first vector data is in a passing relationship with a dot represented by the second coordinate information,*
>
> ***determining a color of a position*** *specified by said second coordinate information based on the position specified by said second coordinate information, said first vector data and a color of a dot on said bitmap data and a color of a dot on said bitmap data, and*
>
> *then setting up said color determined thereby for said target dot specified by said first coordinate information;*
>
> ***controlling*** *so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot specified by said first coordinate information can be performed on all dots on bitmap data to be outputted.*

U.S. Patent Application Publication No. 2006-0119897, the publication document for the present application, provides in paragraph [0169-0171].

> [0169] The color determination unit 2632 determines the color of a position specified by the second coordinate information, based on the first vector data produced by the vectorization unit 262 and the color of a dot on the bitmap data, so that the color determined thereby is setup for a target dot specified by the first coordinate information. How the color determination progresses in the color determination unit 2632 will be discussed below. For convenience of explanation, the phrase "a dot including a position

specified by the second coordinate information" is reworded as a dot represented by the second coordinate information. The "color of a position specified by the second coordinate information" is clipped as the color of the second coordinate information. If a line represented by the first vector data is not placed in such a positional relationship as to pass through a dot represented by the second coordinate information, such a relationship is defined as "non-passing relationship" between the first vector data and a dot represented by the second coordinate information. If it is placed in such a positional relationship as to pass through that dot, it is defined as "passing relationship."

[0170] If the first vector data is in the non-passing relationship with a dot represented by the second coordinate information, the color of that dot is determined as the color of a dot that includes a position specified by the first coordinate information, the information before transforming into the second coordinate information.

[0171] If the first vector data is in the passing relationship with a dot represented by the second coordinate information, the color of the second coordinate information is determined based on a position specified by the second coordinate information, the position of the first vector data, and the colors of dots that surround the dot specified by the second coordinate information, or based on the position specified by the second coordinate information, the position of the first vector data, the color of the dot specified by the second coordinate information, and the colors of its surrounding dots.

Ishida '978 ***fails*** to disclose, teach or suggest:

> ***producing first vector data*** *by vectorizing at least one part of bitmap data before transformation that is stored.*

Page 9 of the Office Action alleges these features can be found in col. 1 lines 9-13, col.1 lines 44-51, and col. 14 lines 44-45.

Col. 1 lines 9-13 of Ishida '978 discloses an invention that relates to magnification or "zoom" processing, particularly reduction processing, of a digital binary image, and to an

image processing apparatus and method for obtaining a high-quality zoomed image using contour information.

Col. 1 lines 44-51 of Ishida '978 discloses an outline extraction unit 2 that extracts a coarse contour vector (an outline vector prior to snl00thing and zoom 45 processing) from the binary image having the raster-scan fornlat. An outline smoothing/zooming unit 3 smoothes and applies zoom processing to the coarse contour vector data in the form of vector data. A binary image reproduction unit 4 reproduces the binary image data in the raster-scan format 50 fro1n the outline vector data.

Col. 14 lines 44-45 of Ishida '978 discloses how at step s222, the outline vector data of the entered binary image is extracted. The zoom ration controller subjects the extracted outline vectors to smoothing/zooming processing.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Ishida '978 fails, to disclose, teach, or suggest producing first vector data by vectorizing at least one part of bitmap data before transformation that is stored.**

On page 7 of the final Office Action dated October, 1, 2008; the examiner readily ***admits*** Ishida '978 does not disclose:

> ***producing bitmap data*** *after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and*
>
> *outputting said bitmap data after transformation,*
>
> *said step of producing bitmap data after transformation comprising:*

producing second coordinate information *by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*

if the first vector data is in a passing relationship with a dot represented by the second coordinate information,

determining a color of a position *specified by said second coordinate information based on the position specified by said second coordinate information, said first vector data and a color of a dot on said bitmap data and a color of a dot on said bitmap data, and*

then setting up said color determined thereby for said target dot specified by said first coordinate information;

controlling *so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot specified by said first coordinate information can be performed on all dots on bitmap data to be outputted.*

The Office Action alleges, however, these claimed features are disclosed in Okazaki '399. This is inaccurate.

Okazaki '399 ***fails*** to disclose, teach or suggest:

producing bitmap data *after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and*

outputting said bitmap data after transformation,

said step of producing bitmap data after transformation.

Page 10 of the Office Action alleges these features can be found in Col. 3, lines 20-23, and Col. 3, lines 50-54.

Col. 3 lines 17-23 of Okazaki '399 discloses a distorted image oftest chart lattice points, an image of a lattice of the test chart before it is passed through the detecting system, and an image obtained when the distorted image is corrected. In the figures, vector X=(x, y) indicates a picture element (pixel) address of the corrected image~ and vector X'=(x', y') indicates a pixel position of the distorted image.

Col. 3, lines 50-54 of Okazaki '399 discloses a conversion from the image of FIG. 5A to that of FIG. 5B indicates that the image is distorted. The reverse conversion f-l from the image of FIG. 5B to that of FIG. 6A indicates that the distorted image is corrected.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Okazaki '399 fails, to disclose, teach, or suggest producing bitmap data after transformation based on an inverse flll1ction of a predetermined calculation, said bitmap data before transformation, and said first vector data; and outputting said bitmap data after transformation, said step of producing bitmap data after transformation.**

Okazaki '399 ***fails*** to disclose, teach or suggest:

producing second coordinate information *by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*

if the first vector data is in a passing relationship with a dot represented by the second coordinate information,

determining a color of a position *specified by said second coordinate information based on the position specified by said second coordinate information, said first vector data and a color of a dot on said bitmap data and a color of a dot on said bitmap data, and*

then setting up said color determined thereby for said target dot specified by said first coordinate information;

Page 10 of the Office Action alleges these features can be found in col. 1, lines 14-16 & grey level, col. 7 line 34, col. 2 lines 5-13 & col. 4 lines 22-27, col. 3, lines 21-24, col. 3 lines 32-33, col. 4 line 10-11, and col. 4, line 8.

Col. 1, lines 14-16 of Okazaki '399 discloses a detecting system that contains an image intensifier (1.1.) for converting a detected X-ray in1age into an optical image, and a television camera for converting the optical in1age into corresponding electrical signals.

Col. 2 lines 5-13 of Okazaki '399 discloses a first operating means for obtaining the address of each pixel in the first image data corresponding to each pixel in the first image data corresponding to each pixel address in the second image data, and second operating means for both obtaining, by an interpolating method and from the pixel intensity, the intensity of a pixel at a pixel address in the first image data, and writing the obtained pixel intensity into a memory location at a predetermined pixel address in the second memory means.

Col. 3, lines 21-24 of Okazaki '399 discloses that vector X=(x, y) indicates a picture element (pixel) address of the corrected image, and vector X'=(x', y') indicates a pixel position of the distorted image.

Col. 3, lines 32-39 of Okazaki '399 discloses a correction of the distorted image is made based on this distorted image. For image correction, a table, for indicating whether or not lattice points exist in the distorted image is prepared (FIG. 4). This table will be referred to as an existing lattice point table. In FIG. 4, a hatched portion indicates an area in which lattice points exist, denotations 111 and n indicating the coordinates of lattice points.

Col. 4 lines 6-15 of Okazaki '399 discloses how it is, therefore, necessary to find a pixel position vector before correction, the gradation, e.g., the intensity of the pixel, being given to a pixel address vector after correction. To this end, by using the lattice point existing table and the lattice distortion vector table, pixel position vector XI before the correction which corresponds to a pixel address vector X after the correction, is obtained, the intensity of the pixel of this pixel position vector X' would be calculated from the distorted image.

Col. 4 lines 17-28 of Okazaki '399 discloses that it is assumed here that the pixel address vector X in the corrected image (for example, an address within an area defined by four lattice points shown in FIG. SA) exists with certainty within an area defined by four lattice points of the distorted image. With this assumption, it, is decided whether or not the coordinate vectors SCm, n), S(m+l, n), (m, rt+1) and S(m+1, n+1) of the four lattice points in the distorted image which correspond to the coordinate vectors V(m, n), V(m+l, n), V(m, n+1) and V (m+1, n+1) of four lattice points containing the pixel address vector X, are within the hatched portion in the existing lattice point table shown in FIG. 4.

Col. 5, lines 26-53 explains how the pixel intensity C(x', y') of the pixel position vector X' and the pixel intensity C(x, y) of the pixel intensity C(x, y) can be obtained.

Col. 5, lines 26-53 explains how the pixel intensity C(x', y') of the pixel position vector X' and the pixel intensity C(x, y) of the pixel intensity C(x, y) can be obtained.

- **Thus Okazaki '399 fails, to disclose, teach, or suggest producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation; if the first vector data is in a passing relationship with a dot represented**

by the second coordinate information, determining a color of a position specified by said second coordinate information based on the position specified by said second coordinate information, said first vector data and a color of a dot on said bitmap data and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information.

Furthermore, since the Office Action is silent regarding "*controlling so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot specified by said first coordinate information can be performed on all dots on bitmap data to be outputted*," Applicant ***assumes this feature to be novel*** since it is not disclosed by Okazaki '399.

In the alternative, assuming the Office Action had argued Okazaki '399 discloses the ***controlling*** **said step of up said color determined thereby**, Applicant submits since Okazaki '399 does not disclose a step for determining color, Okazaki '399 would not be able to control the determining of a target dot, as recited in claim 17.

Accordingly, Applicant respectfully request that the rejection of the claim 17, 25 and 26 under 35 U.S.C. § 103(a) be withdrawn.

Claims *22 and 26*

Claim 26 is dependent upon claim 22. Claim 22 recites:

A computer program stored in a computer readable medium for executing processing of transforming and outputting bitmap data, comprising the steps of;

> ***producing first vector data*** *by vectorizing at least one part of bitmap data stored thereon;*
>
> ***producing bitmap data after transformation based on an inverse function*** *of a predetermined calculation, said bitmap data, and said first vector data; and*

outputting said bitmap data after transformation, said step of producing bitmap data after transformation, comprising the steps of:

***producing second coordinate information** by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*

***determining a color of a position** specified by said second coordinate information based on said first vector data and a color of a dot on said bitmap data, and*

*then setting up said color determined **thereby** for said target dot specified by said first coordinate information; and,*

***controlling** so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot can be performed on all dots on bitmap data to be outputted.*

U.S. Patent Application Publication No. 2006-0119897, the publication document for the present application, provides in paragraph [0173-0174].

[0173] It is also proposed that if a relevant position specified by the second coordinate information is on the left hand with respect to a line represented by the first vector data, the color of a dot leftwardly adjacent to a dot specified by the second coordinate information, in short, the color of a dot immediately on the left, adjacent to the dot is determined as the color of the second coordinate information. If that position is on the right hand with respect to the line, the color of a dot rightwardly adjacent to the dot specified by the second coordinate information, in short, the color of a dot immediately on the right, adjacent to the dot is determined. Furthermore, if the relevant position is located on the line represented by the first vector data, the color of the second coordinate information is determined according to the color of a dot either on the left or right,

adjacent to the dot specified by the second coordinate information. The type of conditioning may be fixed according to the circumstances, for example, in view of the colors of peripheral dots.

[0174] Alternatively, it is also proposed that if a relevant position specified by the second coordinate information is located above a line represented by the first vector data, the average of the color of a dot immediately above a dot specified by the second coordinate information and the colors of dots on the right and the left, adjacent to the dot is applied. If that position is located below the line, the average of the color of a dot immediately below the dot specified by the second coordinate information and the colors of dots on the right and the left adjacent to the dot is applied. However, when determining the color of the second coordinate information, it is preferable that only one dot adjacent to a dot specified by the second coordinate information should be referenced in terms of the clarity of a resulting image.

Ishida '978 ***fails*** to disclose, teach or suggest:

> ***producing first vector data*** *by vectorizing at least one part of bitmap data stored thereon.*

Page 11 of the Office Action alleges these features can be found in col. 1 lines 9-13, col.1 lines 44-51, and col. 13 lines 55-60.

Col. 1 lines 9-13 of Ishida '978 discloses an invention that relates to magnification or "zoom" processing, particularly reduction processing, of a digital binary image, and to an image processing apparatus and method for obtaining a high-quality zoomed image using contour information.

Col. 1 lines 44-51 of Ishida '978 discloses an outline extraction unit 2 that extracts a coarse contour vector (an outline vector prior to snl00thing and zoom 45 processing) from the binary image having the raster-scan forn1at. An outline smoothing/zooming unit 3

smoothes and applies zoom processing to the coarse contour vector data in the form of vector data. A binary image reproduction unit 4 reproduces the binary image data in the raster-scan format 50 fro1n the outline vector data.

Col. 13 lines 55-60 of Ishida '978 discloses how the binary image outputted form the binary image reproduction unit in the raster-scan format is displayed as a soft copy on a CRT, is printed out as a hard copy on paper or is delivered to communication line or the like by the binary image output unit.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Okazaki '399 fails, to disclose, teach, or suggest producing first vector data by vectorizing at least one part of bitmap data stored thereon.**

On page 7 of the final Office Action dated October, 1, 2008; the examiner readily ***admits*** Ishida '978 does not disclose:

> ***producing bitmap data after transformation based on an inverse function*** *of a predetermined calculation, said bitmap data, and said first vector data; and*
>
> *outputting said bitmap data after transformation, said step of producing bitmap data after transformation, comprising the steps of:*
>
> ***producing second coordinate information*** *by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*

determining a color of a position *specified by said second coordinate information based on said first vector data and a color of a dot on said bitmap data, and*

then setting up said color determined thereby for said target dot specified by said first coordinate information

The Office Action alleges, however, these claimed features are disclosed in Okazaki '399. This is inaccurate.

Okazaki '399 ***fails*** to disclose, teach or suggest:

producing second coordinate information *by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;*

determining a color of a position *specified by said second coordinate information based on said first vector data and a color of a dot on said bitmap data, and*

then setting up said color determined thereby for said target dot specified by said first coordinate information.

Page 11-12 of the Office Action alleges these features can be found in col. 1, lines 14-16 & grey level, col. 7 line 34, col. 2 lines 5-13 & col. 4 lines 22-27, col. 3, lines 21-24, col. 3 lines 32-33, col. 4 line 10-11, and col. 4, line 8.

Col. 1, lines 14-16 of Okazaki '399 discloses a detecting system that contains an image intensifier (1.1.) for converting a detected X-ray in1age into an optical image, and a television camera for converting the optical in1age into corresponding electrical signals.

Col. 2 lines 5-13 of Okazaki '399 discloses a first operating means for obtaining the address of each pixel in the first image data corresponding to each pixel in the first image data corresponding to each pixel address in the second image data, and second operating means for both obtaining, by an interpolating method and from the pixel intensity, the

intensity of a pixel at a pixel address in the first image data, and writing the obtained pixel intensity into a memory location at a predetermined pixel address in the second memory means.

Col. 3, lines 21-24 of Okazaki '399 discloses that vector X=(x, y) indicates a picture element (pixel) address of the corrected image, and vector X'=(x', y') indicates a pixel position of the distorted image.

Col. 3, lines 32-39 of Okazaki '399 discloses a correction of the distorted image is made based on this distorted image. For image correction, a table, for indicating whether or not lattice points exist in the distorted image is prepared (FIG. 4). This table will be referred to as an existing lattice point table. In FIG. 4, a hatched portion indicates an area in which lattice points exist, denotations 111 and n indicating the coordinates of lattice points.

Col. 4 lines 6-15 of Okazaki '399 discloses how it is, therefore, necessary to find a pixel position vector before correction, the gradation, e.g., the intensity of the pixel, being given to a pixel address vector after correction. To this end, by using the lattice point existing table and the lattice distortion vector table, pixel position vector XI before the correction which corresponds to a pixel address vector X after the correction, is obtained, the intensity of the pixel of this pixel position vector X' would be calculated from the distorted image.

Col. 4 lines 17-28 of Okazaki '399 discloses that it is assumed here that the pixel address vector X in the corrected image (for example, an address within an area defined by four lattice points shown in FIG. SA) exists with certainty within an area defined by four lattice points of the distorted image. With this assumption, it, is decided whether or not the coordinate vectors SCm, n), S(m+l, n), (m, rt+1) and S(m+1, n+1) of the four lattice points in the distorted image which correspond to the coordinate vectors V(m, n), V(m+l, n), V(m, n+1) and V (m+1, n+1) of four lattice points containing the pixel address vector X, are within the hatched portion in the existing lattice point table shown in FIG. 4.

Col. 5, lines 26-53 explains how the pixel intensity C(x', y') of the pixel position vector X' and the pixel intensity C(x, y) of the pixel intensity C(x, y) can be obtained.

Col. 5, lines 26-53 explains how the pixel intensity C(x', y') of the pixel position vector X' and the pixel intensity C(x, y) of the pixel intensity C(x, y) can be obtained.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Okazaki '399 fails, to disclose, teach, or suggest producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation; determining a color of a position specified by said second coordinate information based on said first vector data and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information.**

Furthermore, since the Office Action is silent regarding controlling so that said step of producing said second coordinate so that said step of producing said coordinate information and said step of setting up said color determined thereby for said target dot can be performed on all dots on bitmap data to be outputted," Applicant assumes this feature to novel since it is not disclosed by Okazaki '399.

In the alternative, assuming the Office Action had argued Okazaki '399 discloses the controlling ... said step of setting up said color determined thereby for said target dot," Applicant submits Okazaki '399 can not perform on all dots on bitmap data to be outputted, as recited in claim 22.

Accordingly, Applicant respectfully requests that the rejection of the claim 22, 25 and 26 under 35 U.S.C. § 103(a) be withdrawn.

Official Notice and Introduction of new evidence after Pre-Appeal Brief Review

Furthermore, in the Advisory Action dated December 24, 2008, the Action considers the varying monochromatic (gray scale) values indicative of color and that it is well known in the art to use intensity as a pseudo color. The action also states the Office Action dated October 1, 2008 does not take Official Notice.

However, in the Notice of Panel Decision form Pre-Appeal Brief Review dated March 13, 2009 in the continuation sheet, the Panel introduces prior art reference in the form of non-patent literature (Tang et al, *Monochrome image representation and segmentation based on the pseudo-color PCT transformations*, 2001.) to indicate the well known nature of the pseudo color principal and transformation of grayscale into color.

By introducing this new reference at this point in the prosecution, the Applicant has not chance to rebut substantively the Tang reference.

If the USPTO wishes include an argument as to the obviousness of using Tang in view of Ishida '978 in further view of Okazaki '399, the USPTO must lift the finality of the Office Action dated October 1, 2008 and **issue a non-Final rejection** which includes the Tang reference.

Notwithstanding the notion that Tang was improperly introduced, the Tang reference still ***fails*** to disclose, teach or suggest the features recited in claims 3, 17, or 22.

Instead, the reference Tang illustrates monochrome image representation and segmentation based on the pseudo-color transformation and principal components transform.

B. The Examiner erred in rejecting claims 7-9, 18, 23, and 27-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Karidi '094.

The Office action has not established *prima facie* case under 35 U.S.C. § 103. Specifically, "to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan

would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. and Inter. 1985).

Moreover, in *KSR International v. Teleflex Inc.,* the Supreme Court expounded on the meaning of obviousness in applying prior art. MPEP states twice at §§2141 III and 2142 as follows:

> The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) noted that **the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit**. The Federal Circuit has stated that "**rejections on obviousness cannot be sustained with mere conclusory statements**; instead, there **must** be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR,* 550 U.S. at ___ , 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). (Emphasis added.)

As such, this rejection of claims 7-9, 18, 23, and 27-29 under 35 U.S.C. § 103(a) as being unpatentable over Ishida '978 in view of Karidi '094 is traversed at least for the following reasons.

Claims *7-9 and 27*

Claims 8-9 and 27 are dependent upon claim 7. Claim 7 recites:

An output apparatus comprising:

> ***a bitmap data storage unit*** *for storing bitmap data before transformation;*
>
> ***a bitmap data acquisition unit*** *for acquiring bitmap data from said bitmap data storage unit;*

a transformation rule retention unit *for* <u>*retaining at least one bitmap data transformation rule that is composed of a pair of information on certain part of said bitmap data*</u> *and*

information indicating vector data that forms an image after transformation of said certain part;

a data transformation unit *for* <u>*transforming*</u> *part of said bitmap data according to said rule,*

<u>*checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit*</u>*; and,*

if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and

an output unit *for outputting data that is produced based on transformation results from said data transformation unit and processing results from said jaggy elimination processing unit.*

Ishida '978 <u>***fails***</u> to disclose, teach or suggest:

a bitmap data storage unit *for storing bitmap data before transformation;*

a bitmap data acquisition unit *for acquiring bitmap data from said bitmap data storage unit;*

> ***an output unit*** *for outputting data that is produced based on transformation results from said data transformation unit and processing results from said jaggy elimination processing unit.*

Page 15 of the Office Action alleges these features can be found in col. 1 lines 9-13, col.1 lines 41-44, and col. 3 lines 30-33.

Col. 1 lines 9-13 of Ishida '978 discloses an invention that relates to magnification or "zoom" processing, particularly reduction processing, of a digital binary image, and to an image processing apparatus and method for obtaining a high-quality zoomed image using contour information.

Col. 1 lines 44-51 of Ishida '978 discloses an outline extraction unit 2 that extracts a coarse contour vector (an outline vector prior to snl00thing and zoom 45 processing) from the binary image having the raster-scan fornl at. An outline smoothing/zooming unit 3 smoothes and applies zoom processing to the coarse contour vector data in the form of vector data. A binary image reproduction unit 4 reproduces the binary image data in the raster-scan format 50 fro1n the outline vector data.

Col. 3, lines 30-33 of Ishida '978 discloses that the outline extraction unit 2 extracts areas of contiguous black pixels as coarse-contour vector loops in which a horizontal vector and a vertical vector are always interconnected in alternating fashion. It is so arranged that the direction in which extraction processing advances is such that the side to the right of the direction of advance is the area of the black pixels.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Ishida '978 fails to disclose, teach, or suggest a bitmap data storage unit for storing bitmap data before transformation; a bitmap data acquisition unit for acquiring bitmap data from said bitmap data storage unit; an output unit for outputting data that is produced based on transformation results from said data transformation unit and processing results from said jaggy elimination processing unit.**

On page 7 of the Office Action dated October, 1, 2008; the examiner readily ***admits*** Ishida '978 does not disclose:

> ***a transformation rule retention unit*** *for retaining at least one bitmap data transformation rule that is composed of a pair of information on certain part of said bitmap data and*
>
> *information indicating vector data that forms an image after transformation of said certain part;*
>
> ***a data transformation unit*** *for transforming part of said bitmap data according to said rule,*
>
> *checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,*
>
> *if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.*

The Office Action alleges, however, these claimed features are disclosed in Karidi '094. This is inaccurate.

U.S. Patent Application Publication No. 2006-0119897, the publication document for the present application, provides in paragraph [0117] and [0128-0133].

> [0117] The rule retention unit 1001 retains at least one rule according to which bitmap data is transformed. The transformation rule is a pair of information on certain part of bitmap data and information indicating vector data that composes an image resulting from the transformation of that certain part. Data configuration of the rule is irrelevant. A detailed description on the transformation rule will be provided below. For the rule retention unit 1001, it is preferable to employ a nonvolatile memory apparatus. However, an alternative volatile type is also feasible.
>
> [0118] According to the transformation rule in the rule retention unit 1001, the data transformation unit 1002 transforms part of the bitmap data. Typically, the data transformation unit 1002 can be formed by using an MPU, a memory, and the like, and all processes assigned thereto are realized by software that is stored in a recording medium such as a ROM. However, hardware implementation (using a dedicated circuit) is also feasible.
>
> [0128] In step S1201, the data transformation unit 1002 enters 1 (one) to a counter i.
>
> [0129] In step S1202, the data transformation unit 1002 obtains the ith matrix from the bitmap data. The matrix is a dot pattern of n.times.m (n and m represent any integer), and a 3.times.3 dot pattern is preferable when considering the fact that the total amount of data for dot patterns is small, and the application of a transformation rule has been proved useful in many scenarios. Instead of a matrix, other variations of dot patterns are feasible including a cross, and a group of dots that are not adjacent each other. However, in terms of simplified and accelerated processing, it is preferable to employ a matrix.
>
> [0130] Generally, when i is 1, the n.times.m matrix is obtained from the upper left corner of the bitmap data. Likewise, when i is 2, the matrix is obtained by shifting to right by

one dot.

[0131] In step S1203, the data transformation unit 1002 checks whether or not the ith matrix was successfully obtained in step S1202. If the relevant matrix is confirmed, it proceeds to step S1204; otherwise, the ongoing process terminates.

[0132] In step S1204, the data transformation unit 1002 enters 1 (one) to a counter j.

[0133] In step S1205, the transformation unit 1002 obtains a jth matrix before transformation from the rule retention unit 1001. Note that what the rule retention unit 1001 retains is a correspondence table between a matrix before transformation and a matrix after transformation. An example for this will be provided below.

Karidi '094 ***fails*** to disclose, teach or suggest:

> ***a transformation rule retention unit*** *for retaining at least one bitmap data transformation rule that is composed of a pair of information on certain part of said bitmap data and*
>
> *information indicating vector data that forms an image after transformation of said certain part;*
>
> ***a data transformation unit*** *for transforming part of said bitmap data according to said rule,*
>
> *checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,*

if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.

Page 15-16 of the Office Action alleges these features can be found in paragraphs 53-54. However, paragraphs 53-54 of Karidi '094 discloses how:

> [0053] each pixel has a 3X3 neighborhood that is considered each pixel has a 3x3 neighborhood that is considered. The region is binarized into ink and background pixels using the threshold Tdark. For each pattern of nine (9) ink or background pixels in the window, a smoothing level is assigned with values ranging from zero (0) to three (3). The ink value of the center pixel is then modified in accordance to this smoothing level.
>
> [0054]The distinct ink and background patterns in the preferred embodiment and their corresponding smoothing levels, herein also referred to as jaggy levels. Patterns that are related to one another through a rotation or a reflection are assigned the same smoothing level. Furthermore, the list only shows those cases wherein the center pixel is an ink pixel. The smoothing level of the center pixel when it is a background pixel can be deduced from the binary complement of the list.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Karidi '094 fails to disclose, teach, or suggest a transformation rule retention unit for retaining at least one bitmap data transformation rule that is composed of a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part; a data transformation**

unit for transforming part of said bitmap data according to said rule, checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.

Accordingly, Applicant respectfully request that the rejection of claims 7-9 and 27 under 35 U.S.C. § 103 be withdrawn.

Claims *18 and 28*

Claims 28 is dependent upon claim 18. Claim 18 recites:

A method for outputting comprising the steps of:

> ***acquiring bitmap data stored;***
>
> ***transforming part of said bitmap data*** *according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part,*
>
> *said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,*

<u>if matched replacing the information</u> on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and

***outputting data** that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step.*

Ishida '978 ***<u>fails</u>*** to disclose, teach or suggest:

acquiring bitmap data stored;

***outputting data** that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step.*

Page 17 of the Office Action alleges these features can be found in col. 1 lines 9-13, col.1 lines 41-44, and col. 3 lines 53-62.

Col. 1 lines 9-13 of Ishida '978 discloses an invention that relates to magnification or "zoom" processing, particularly reduction processing, of a digital binary image, and to an image processing apparatus and method for obtaining a high-quality zoomed image using contour information.

Col. 1 lines 44-51 of Ishida '978 discloses an outline extraction unit 2 that extracts a coarse contour vector (an outline vector prior to snl00thing and zoom 45 processing) from the binary image having the raster-scan forn1at. An outline smoothing/zooming unit 3 smoothes and applies zoom processing to the coarse contour vector data in the form of vector data. A binary image reproduction unit 4 reproduces the binary image data in the raster-scan format 50 fro1n the outline vector data.

Col. 3, lines 53-62 of Ishida ‘978 discloses corner points at jaggies caused by noise or the like and corner points resulting from notches or the like are excluded. A contour

point that has been subjected to first smoothing and judged to be a corner point is treated as a point not to be smoothed, namely affixed point at this position, by subsequent second smoothing.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Karidi '094 fails to disclose, teach, or suggest acquiring bitmap data stored; outputting data that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step**.

On page 17 of the Office Action dated October, 1, 2008; the examiner readily ***admits*** Ishida '978 does not disclose:

> ***transforming part of said bitmap data*** *according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part,*
>
> *said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,*
>
> *if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.*

The Office Action alleges, however, these claimed features are disclosed in Karidi '094. This is inaccurate.

Karidi '094 ***fails*** to disclose, teach or suggest:

transforming part of said bitmap data *<u>according to a transformation rule</u> having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part,*

said <u>transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit</u> matches the information on certain part of bitmap data retained by the rule retention unit; and,

<u>if matched replacing the information</u> on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.

Page 15-16 of the Office Action alleges these features can be found in paragraph 54. However, paragraph 54 of Karidi '094 discloses how:

> [0054]The distinct ink and background patterns in the preferred embodiment and their corresponding smoothing levels, herein also referred to as jaggy levels. Patterns that are related to one another through a rotation or a reflection are assigned the same smoothing level. Furthermore, the list only shows those cases wherein the center pixel is an ink pixel. The smoothing level of the center pixel when it is a background pixel can be deduced from the binary complement of the list.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Karidi '094 fails to disclose, teach, or suggest transforming part of said bitmap data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part, said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.**

Accordingly, Applicant respectfully request that the rejection of claims 18 and 28 under 35 U.S.C. § 103 be withdrawn.

<u>**Claims *23 and 29***</u>

Claims 29 is dependent upon claim 23. Claim 23 recites:

A computer program stored in a computer readable medium for executing the steps of:

> ***acquiring bitmap data stored thereon;***
>
> ***transforming part of said bitmap*** *data <u>according to a transformation rule</u> having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part,*

said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,

if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and

***outputting data** that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step.*

Ishida '978 ***fails*** to disclose, teach or suggest:

acquiring bitmap data stored thereon;

Page 18 of the Office Action alleges these features can be found in col. 1 lines 9-13, col.1 lines 41-44, and col. 3 lines 53-62.

Col. 1 lines 9-13 of Ishida '978 discloses an invention that relates to magnification or "zoom" processing, particularly reduction processing, of a digital binary image, and to an image processing apparatus and method for obtaining a high-quality zoomed image using contour information.

Col. 1 lines 44-51 of Ishida '978 discloses an outline extraction unit 2 that extracts a coarse contour vector (an outline vector prior to snl00thing and zoom 45 processing) from the binary image having the raster-scan forn1at. An outline smoothing/zooming unit 3 smoothes and applies zoom processing to the coarse contour vector data in the form of vector data. A binary image reproduction unit 4 reproduces the binary image data in the raster-scan format 50 fro1n the outline vector data.

Col. 3, lines 53-62 of Ishida '978 discloses corner points at jaggies caused by noise or the like and corner points resulting from notches or the like are excluded. A contour point that has been subjected to first smoothing and judged to be a corner point is treated as a point not to be smoothed, namely affixed point at this position, by subsequent second smoothing.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Karidi '094 fails to disclose, teach, or suggest acquiring bitmap data stored thereon.**

On page 17 of the Office Action dated October, 1, 2008; the examiner readily ***admits*** Ishida '978 does not disclose:

> ***transforming part of said bitmap*** *data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part,*
>
> *said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,*
>
> *if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.*

The Office Action alleges, however, these claimed features are disclosed in Karidi '094. This is inaccurate.

Karidi '094 ***fails*** to disclose, teach or suggest:

transforming part of said bitmap *data* *according to a transformation rule* *having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part,*

said transforming comprising checking *whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and,*

if matched replacing the information *on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.*

Page 19 of the Office Action alleges these features can be found in paragraph 54. However, paragraph 54 of Karidi '094 discloses how:

[0054]The distinct ink and background patterns in the preferred embodiment and their corresponding smoothing levels, herein also referred to as jaggy levels. Patterns that are related to one another through a rotation or a reflection are assigned the same smoothing level. Furthermore, the list only shows those cases wherein the center pixel is an ink pixel. The smoothing level of the center pixel when it is a background pixel can be deduced from the binary complement of the list.

The Office Action ***fails*** to identify the particular units that are deemed essential to the invention.

Furthermore, the characterization within the Office Action of the claim language appears to recast the express language found within the claims by redefining the invention in a manner different than from what is set forth within the claims. The Examiner'

- **Thus Karidi '094 fails to disclose, teach, or suggest transforming part of said bitmap data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part, said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part.**

Accordingly, Applicant respectfully request that the rejection of claims 18 and 28 under 35 U.S.C. § 103 be withdrawn.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A include the amendments filed by Applicant on December 15, 2008, and do not include the amendment(s) filed on December 15, 2008.

Dated: April 13, 2009

Respectfully submitted,

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APPENDIX A

1. (Canceled)

2. (Canceled)

3. An output apparatus for transforming and outputting bitmap data comprising:
a bitmap data storage unit for storing bitmap data before transformation;
a vectorization unit for producing first vector data by vectorizing at least one part of said bitmap data;
a data production unit for producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and
an output unit for outputting said bitmap data after transformation produced by said data production unit, said data production unit comprising:
an inverse transformation unit for producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed, using said inverse function of said predetermined calculation;
a color determination unit for determining a color of a position, if the first vector data is in a passing relationship with a dot represented by the second coordinate information, the color of the position specified by the second coordinate information being determined based on the position specified by said second coordinate information, said first vector data produced by said vectorization unit and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information; and
a control unit for controlling so that said second coordinate information production by said inverse transformation unit and said dot color determination by said color determination unit can be performed on all dots on bitmap data to be outputted.

4. The output apparatus according to claim 3, wherein:

in a case where a line represented by said first vector data that was produced by said vectorization unit passes through a dot including a position specified by said second coordinate information,
said color determination unit determines in such a manner that if said position is placed above said line,
a color of a dot immediately above said dot including said position is determined as a color of said position, or if placed below said line,
a color of a dot immediately below said dot including said position is determined as a color of said position, and then sets up said color determined thereby for said target dot specified by said first coordinate information.

5. The output apparatus according to claim 3, wherein:
in a case where a line represented by said first vector data that was produced by said vectorization part passes through a dot including a position specified by said second coordinate information,
said color determination unit determines in such a manner that if said position is placed on a left hand with respect to said line, a color of a dot immediately on a left, adjacent to said dot including said position is determined as a color of said position, or if placed on a right hand, a color of a dot immediately on a right, adjacent to said dot including said position is determined as a color of said position, and then sets up said color determined thereby for said dot specified by said first coordinate information.

6. (Canceled)

7. An output apparatus comprising:
a bitmap data storage unit for storing bitmap data before transformation;
a bitmap data acquisition unit for acquiring bitmap data from said bitmap data storage unit;

a transformation rule retention unit for retaining at least one bitmap data transformation rule that is composed of a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part;
a data transformation unit for transforming part of said bitmap data according to said rule, checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched
replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and
an output unit for outputting data that is produced based on transformation results from said data transformation unit and processing results from said jaggy elimination processing unit.

8. The output apparatus according to claim 7, wherein: said certain part is in a rectangular shape having a size of n x m, where n and m represent a positive integer.

9. The output apparatus according to claim 8, wherein: said size is 3 x 3.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. A method for transforming and outputting bitmap data comprising the steps of:
producing first vector data by vectorizing at least one part of bitmap data before transformation that is stored;
producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data; and
outputting said bitmap data after transformation, said step of producing bitmap data after transformation comprising:
producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed,
using said inverse function of said predetermined calculation; if the first vector data is in a passing relationship with a dot represented by the second coordinate information,
determining a color of a position specified by said second coordinate information based on the position specified by said second coordinate information, said first vector data and a color of a dot on said bitmap data and a color of a dot on said bitmap data, and then setting up said color determined thereby for said target dot specified by said first coordinate information;
controlling so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot specified by said first coordinate information can be performed on all dots on bitmap data to be outputted.

18 A method for outputting comprising the steps of:
acquiring bitmap data stored;
transforming part of said bitmap data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part, said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule

retention unit; and, if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and
outputting data that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step.

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. A computer program stored in a computer readable medium for executing processing of transforming and outputting bitmap data, comprising the steps of;
producing first vector data by vectorizing at least one part of bitmap data stored thereon;
producing bitmap data after transformation based on an inverse function of a predetermined calculation, said bitmap data, and said first vector data; and
outputting said bitmap data after transformation, said step of producing bitmap data after transformation, comprising the steps of:
producing second coordinate information by inversely transforming first coordinate information that specifies a target dot to be processed,
using said inverse function of said predetermined calculation; determining a color of a position specified by said second coordinate information based on said first vector data and a color of a dot on said bitmap data, and then
setting up said color determined thereby for said target dot specified by said first coordinate information; and controlling so that said step of producing said second coordinate information and said step of setting up said color determined thereby for said target dot can be performed on all dots on bitmap data to be outputted.

23. A computer program stored in a computer readable medium for executing the steps of: acquiring bitmap data stored thereon;

transforming part of said bitmap data according to a transformation rule having a pair of information on certain part of said bitmap data and information indicating vector data that forms an image after transformation of said certain part, said transforming comprising checking whether or not the information on certain part of bitmap data obtained by the bitmap data acquisition unit matches the information on certain part of bitmap data retained by the rule retention unit; and, if matched replacing the information on certain part of bitmap data obtained by the bitmap data acquisition unit with a pair of information indicating vector data having an image resulting from the transformation of the certain part; and

outputting data that is produced based on transformation results obtained in said data transformation step and processing results obtained in said jaggy elimination step.

24. (Canceled)

25. An output apparatus for transforming and outputting bitmap data according to claim 3, wherein bitmap data after transformation is directly based on an inverse function of a predetermined calculation, said bitmap data before transformation, and said first vector data.

26. An output apparatus for transforming and outputting bitmap data according to any one of claims 3, 17, and 22,

wherein a predetermined calculation is a calculation for executing a predetermined transformation on the bitmap data acquired by the bitmap data acquisition unit.

27. An output apparatus for transforming and outputting bitmap data according to claim 7, further comprising:

a jaggy elimination processing unit for executing processing of eliminating jaggies appearing on said bitmap data.

28. A method for outputting according to claim 18, further comprising the step of eliminating jaggies appearing on said bitmap data.

29. A computer program stored in a computer readable medium according to claim 23, further comprising the step of:
eliminating jaggies appearing on said bitmap data.

APPENDIX B

There is no other evidence which will directly affect or have a bearing on the Board's decision in this appeal.

APPENDIX C

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal. There are no other court proceedings which will or have a bearing on the court's decision.